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ON
THE TREATMENT
OF
THE RUPTURE OF THE FEMALE PERINEUM.

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ON
THE TREATMENT
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RUPTURE OF THE FEMALE PERINEUM

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THE TREATMENT
OF
RUPTURE OF THE FEMALE PERINEUM
IMMEDIATE AND REMOTE

BY

GEORGE GRANVILLE BANTOCK, M.D., F.R.C.S. EDIN.

SURGEON (FOR IN-PATIENTS) SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN
FELLOW OF THE OBSTETRICAL, CLINICAL, AND HARVEIAN SOCIETIES



WITH ILLUSTRATIONS

LONDON

J. & A. CHURCHILL, NEW BURLINGTON STREET

1878
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P R E F A C E.

THE subject of Rupture of the Female Perineum is one which must interest a very large number of the profession. This condition, for the most part, comes under the notice of the busy General Practitioner in its recent state, and, as a rule, only at a more or less remote period under that of the Consulting Surgeon. Of course the treatment at these two stages differs very materially ; for while, on the one hand, we find the parts ready prepared for the sutures, on the other, a delicate and careful operation is necessary before arriving at the same stage. It has been my object to simplify both procedures, as well as to insure the greatest possible success ; and, guided by my past experience, which as yet records no failure, I have every confidence in commending the practice herein advocated.

G. G. B.

94, MOUNT STREET, GROSVENOR SQUARE, W.
March, 1878.

ON
THE TREATMENT
OF
RUPTURE OF THE FEMALE PERINEUM.

HISTORICAL SUMMARY.

WE are indebted for the first notice of any operation for the restoration of a ruptured perineum to the great French surgeon, Ambrose Paré,* in these words—"and if it happen, as it sometimes does, that after a forcible delivery the genital parts of the mother are torn, and that the two openings are converted into one, then we should, by means of some stitches, unite the parts unnaturally separated, and treat the wound according to art."

Guillemeau, "the pupil, the rival, and contemporary" of Ambrose Paré, reports the first case of perineal suture. This case was "successful, is given in detail, and is well authenticated." (Roux.)

* Ambrose Paré Œuvres, ed. Malgaigne, t. ii. p. 718 (1561).

The next case on record is one by another French surgeon, Delamotte,* who wrote about the middle of the eighteenth century. The case is as follows:—"I found the interspace (perineum) open, and this opening extended about an inch along the vagina and rectum, but giving rise to no inconvenience in consequence of the presence of retentive power. I then assured the patient that the accident was of no consequence, but that, if she liked, I could cure her immediately. Without hesitation she gave her consent, and I immediately introduced three stitches, one in the vagina and bowel, the other at the extremity of the anus, and the third at the fourchette. I only saw this woman twice in ten days, and found her so perfectly cured that I took out the stitches. Since that time she has been confined several times without a return of the accident." Hitherto it appears that we have been dealing with the recent rupture, but in our own country, about the same time, Smellie, who was then at the height of his fame, taught that it was possible in some cases, not only to restore the rupture by immediate operation, but at a more remote period. He was not, however, very

* Le Sieur de la Motte, t. ii. part iii. p. 1218 (1765), observ. ccccii.

confident, for he says, "when the laceration reaches so high as to endanger the woman's retentive faculty, this method" (of paring off the callous edges or scarifying with a lancet or bistoury, and insertion of deep sutures), "doubtless, ought to be tried; but not otherwise, because the operation *very rarely succeeds*."*

Smellie's teaching took no root, as might have been expected, and accoucheurs were in the habit of leaving the cases to nature for the most part, sometimes attempting a cure in recent cases by the application of Peruvian or Canada Balsam, by inducing constipation, &c. But a new era was begun when, at the end of last century, two French surgeons, Noel of Reims and Saucerotte of Lunéville, brought the matter before the French Academy. Saucerotte read his paper in Paris in the year 1797, entitled "Observation on a case of rupture of the recto-vaginal septum during a laborious confinement in which the cure was attempted more than three months and a half after delivery." His experience in the case here recorded led him to the following conclusions:—"1st, that constipation, which at the time of a

* Smellie's "Midwifery" (McClintock, New Syd. Soc.'s Edit.), vol. i. p. 373.

recent solution of continuity might be a means of cure, is of no use when, as is generally said, the edges of the division have become callous through lapse of time. 2nd, after the operation a cooling and relaxing regimen, a free state of the bowels obtained by mild laxatives, but not by injections, is to be preferred to constipation. 3rd, that it is absolutely indispensable to divide the sphincter ani if we wish to avoid a barrier which offers more resistance to the escape of fæces than the edges of the recto-vaginal solution of continuity if we wish to facilitate the cohesion of the divided parts, which I believe impossible without the preliminary precaution."

So that we find Baker Brown anticipated in that part of the operation which he considered peculiar to himself.

Noel of Reims, as I have indicated, divides with Saucerotte the honour of this important advance by also recording a successful case.

In France the seed thus sown, however, took root slowly, for we find the operation almost forgotten. Some twenty years afterwards M. Dubois operated once without success, and M. Paul Dubois also once, in the Maternity Hospital, with only partial success, both following the method of Noel and Saucerotte. The great

Dupuytren also, about the year 1820, recorded a successful case to which he attached little importance. About the same time M. Montain, jun., reported in the "*Revue Médicale*" a case of rupture of the perineum. But the greatest impulse was given to this operation by M. Roux, who published a paper on the subject.* In this paper M. Roux described his method of employing the quilled suture, now used for the first time, and gave details of five cases, of which four were successful. From this time the acceptance of the operation was no longer doubtful, and he had worthy successors and imitators in Velpeau, Maisonneuve, Nélaton, Jobert de Lamballe, and others.

In Germany the subject appears to have attracted little attention, and for the first quarter of this century we find hardly any mention of it. Obstetric writers, such as Mursinna, and Wentzel, and Oslander, were chiefly occupied in discussing the most opportune time for the operation. It was not till Dieffenbach (1829) gave forth his views that we find the subject carefully studied, and the conclusions at which he arrived and the principles he laid down show the care he bestowed upon it. This surgeon laid great stress on the value of his

* *Gazette Médicale*, t. ii. Jan. 11, 1834.

parallel incisions, a procedure in which he has had few followers. For the last thirty years the value of this operation has been recognised, and it has been practised with success, notably by Langenbeck and others.

Still more scanty is the literature of this subject in our own language, and those obstetricians who deigned to notice it did so with the object of discountenancing any operative interference.

To Baker Brown must be given the credit of establishing the operation in this country—and his list of operations is probably the longest on record—and it has now taken its place in our systematic treatises on surgery and obstetrics.

It would serve no useful purpose to describe here the various methods of preparing the parts for suture, from the simple method of Smellie to the complicated methods of Dieffenbach and Jobert de Lamballe, nor the various forms of suture, such as the twisted, serpentine, quilled, button, stay (of Brickell), and simple suture, nor to treat of the various materials employed, such as silk, hemp, iron, silver and gilt wire, catgut, &c. The operation is now so simplified that, as the sequel will show, I may here dismiss this part of my subject, merely remarking that as “brevity is

the soul of wit," so may simplicity be regarded as the perfection of an operation.

Definition.—By the term "*Rupture of the Perineum*" I mean laceration of a part or the whole of the perineal body. This structure,* which constitutes the central portion of the perineum, is a triangular or short wedge-shaped body, interposed between the diverging vagina and rectum at their termination, and its base constitutes a considerable part of the perineum. It consists essentially of fibro-elastic tissue, vessels, and nerves. Covered by fascia, it gives insertion to the anterior fibres of the superficial sphincter ani, to the inner fibres of the two transverse muscles of the perineum, and to some of the fibres of the bulbo-cavernosus muscle of each side. Fig. 1, which is a reduced outline from Savage (Pl. viii., Fig. 2), shows the position and wedge-shaped form of this body, and it will readily be seen that on the integrity of this structure depends the efficiency of the perineum. This part of the subject is also well illustrated by Dr. T. G. Thomas, in a series of diagrams.†

The above definition necessarily includes all

* Savage, "Anatomy of the Female Pelvic Organs." Third edit. p. 4.

† "Diseases of Women." By T. Gaillard Thomas, M.D. Fourth edit. 1875.

those cases in which the rupture extends beyond the perineal body, involving any, or all the, fibres of the sphincter ani, and also any portion of the recto-vaginal septum. Superficial lacerations occur in the process of parturition, involving only the skin or mucous membrane, or the duplicature of skin and mucous membrane *as far as* the perineal body. These are of course excluded.

It is the fashion in systematic treatises to lay down hard and fast lines which in practice are found to be purely imaginary. Thus Dr. T. G. Thomas divides lacerations of the perineum into four varieties—viz.,

1. "Superficial rupture of the fourchette and perineum not involving the sphincters."
2. "Rupture *to* the sphincter ani."
3. "Rupture *through* the sphincter ani."
4. "Rupture through the sphincter ani, and involving the vaginal septum."

The preceding definition appears to me sufficient for all practical purposes; for, as regards the necessity of an operation, it makes no difference whether the rupture extends *to* or *through* the sphincter ani, since, in either case, the *perineal body* suffers, and the vagina loses its support.

The treatment of rupture of the perineum, differing in its particulars according to the period

at which the operation is performed, is to be considered under two heads—

I. Immediate operation.

II. Remote operation.

I. IMMEDIATE OPERATION.

Obstetricians are agreed that superficial laceration involving the mucous membrane and skin only is a very common occurrence, especially in primiparæ, and that such a condition requires no operative interference. The preceding definition, as I have already said, excludes these cases. But it is in those cases in which it is evident that the perineal body, partly or wholly, is involved that difference of opinion arises; and it is with reference to the latter that I lay it down as an incontrovertible proposition that, *as a general rule, the immediate operation should always be performed.* Or, in the words of Prof. Von Hecker, “in my opinion, the right way to manage every rupture is the application of the suture as soon as possible after delivery.”

It is here convenient to state that superficial lacerations of the perineum, when looked at in their recent state, generally appear larger than they really are because of the swollen state of the

tissues. The exact amount is to be ascertained, not by looking at the extent of raw surface, but by measuring the length of perineum left, and by examining the condition of the perineal body with the index-finger in the vagina, and the thumb on the remaining perineum.

Some years ago I attended, in labour, two patients who had, in their first and preceding confinements, suffered from complete rupture of the perineum. In both cases the injury had been repaired by operation by a late distinguished operator; in the case of A by the second operation, and in that of B by the third operation. It will be anticipated that in each case rupture again occurred, and that it was impossible to prevent it after the loss of so much tissue as repeated operations involved. In both cases I could feel the perineum giving way before the formation of a "perineal tumour," and my efforts were directed to limiting the rupture as much as possible. I at once brought the parts together by suture, using fine annealed iron wire, and the result was complete union. I attended B in her third confinement, which was, briefly, a repetition of her second. Again in her fourth, with a like result. It is a fact that in both these cases an attempt was made in the first confinement to obtain union

by the means recommended by the opponents of the immediate operation, with the result we have seen. Nor is the explanation of the failure far to seek; for it must be evident that while the close apposition of the legs tends to keep the lacerated surfaces in contact, it at the same time has the effect of closing the vaginal outlet proper. Hence it follows that the lochial discharge finds its way out as it can, and that is as much *between* the raw surfaces as *per viam naturalem*. In the face of the above two cases it would seem to be scarcely necessary to argue in favour of the immediate operation; but in consequence of recent utterances I feel it will not be amiss to pursue the subject further.

In a recent discussion at the Obstetrical Society of London, gentlemen were heard declaring that immediate operation was unnecessary; that the parts healed up spontaneously, and so forth. This subject was discussed at some length by the New York Obstetrical Society in the year 1875. The "American Journal of Obstetrics" for April, 1876, contains a paper by Dr. M. J. Moses, of New York, on "Perineal Injuries," in which he advises non-interference immediately for the following extraordinary reasons:—

1. "Deep and extensive injuries are not dis-

posed to heal owing to the devitalization of the tissues from pressure, and the exposure of the surface of the wound to the irritating influences of the lochia." I shall adduce additional evidence to prove that the parts are not only *not indisposed* to heal, but that healing after the application of sutures is the rule, while the forcible and effectual apposition of the raw surfaces by means of suture is the "very thing" to obviate the irritating influences of the lochia, and to allow of their free escape by a suitable position. Of course if the case be one of those *mismanaged* ones in which the head of the child has been allowed to remain for many hours in the pelvis, and perhaps on the perineum, and in which sloughing must inevitably follow, it will be better to let the rupture alone, as it will probably be found that the bladder has also suffered. But this is an extreme case, and does not appear to be within the view of the author.

2. "The shock which the patient has suffered both from the labour and the accident renders her an unfavourable subject for operation." If the shock be so great that there remains no reparative power, then the patient will assuredly die, and it will be well to let her alone; but if she has enough vitality for the repair of the cervical

bruising (and perhaps laceration), for the processes of involution of the uterus and the secretion of milk, then surely she is equal to the repair of an injured perineum when put into the most favourable condition for healing.

3. "The surrounding situation: a lying-in chamber; a possibly crying child; an exhausted doctor, and a nervously over-anxious community of friends." It would be idle to answer such a farrago of nonsense. One cannot withhold from the author the credit of great ingenuity in compiling such an array of extraordinary concomitant circumstances.

Such are some of the miserable arguments to which the opponents of the immediate operation are reduced.

4. "The *fact* that any case which sutures would *possibly* assist (the italics are in the original) will as surely heal without them, if the knees are bandaged, and the vagina kept cleansed from impurities." The above cases are a sufficient answer to this objection, and the *fact* is just the other way, as I shall yet further prove. How did it happen that the late Mr. Baker Brown was able to place on record over a hundred cases of operation for ruptured perineum, and that surgeons are so frequently called upon to per-

form this operation, if the author's assertion be a *fact*?

At the meeting of the New York Obstetrical Society, held on March 23rd, 1875 (already referred to), Dr. Noeggerath adduced the statistics of a number of continental accoucheurs—viz., Hecker of Munich, Winckel of Dresden, Abegg of Danzig, Schroeder, Bidder and Sutigin of St. Petersburg, Holst of Dorpat, and Prof. B. Schultze; and he deduced from these that “complete success was obtained in about seventy-five out of every hundred cases of immediate operation.” It is worthy of special note that when the operation was performed by the principal, success was almost invariable, and that when failure resulted it was attributable to the inexperience and want of skill on the part of young physicians or students who had the management of the cases (Schroeder, Bidder, and Sutigin). Thus Prof. Von Holst “claims to have closed up by first intention every single case in which he performed the operation,” and Prof. Schultze “succeeded in uniting all of the thirty deep ruptures upon which he operated immediately after confinement, with the exception of two, where the process of healing was interfered with by puerperal ulceration of the vagina.” Looking back at my own experience, I can affirm

that I have never known the immediate operation fail, and equally, that the contrary method has never succeeded in those cases of even partial rupture in which I have been *prevented* from operating. I regard the operation as one of the greatest certainties in the whole range of surgery.

The immediate operation is to the advantage of the patient in more ways than one. The discomfort attending the use of sutures lasts for two or three days only ; whereas the soreness accompanying the slow granulation of the ruptured tissues continues for a week or two, and the frequent dressings and cleansings are a source of great discomfort, if not pain, to her. And whilst it is necessary for the patient to keep her bed during the puerperal period, is it not much better to take advantage of the opportunity thus offered? Present suffering does not disturb her with the thought that at a future time a painful operation will be necessary, and that she will have to go through what may be regarded as a second lying-in. But this is not all ; for it has been shown that puerperal fever is more likely to attack the patient who has not been operated on. Thus Dr. Sutigin reports that of *sixteen* cases of rupture where no operation was performed, only 6 per cent. remained free from puerperal fever, while among *twenty-six* cases

which were operated on, 14 per cent. remained healthy; and while 12 per cent. died among the former, only 7 per cent. died among the latter. (Noeggerath).

The immediate operation requires as much care and skill as the remote, and an equal attention to details. I have never found it necessary to place the patient otherwise than in the usual obstetric position, provided a good light could be obtained. The operator, however, has this advantage, that the raw surfaces are ready to hand, and with a little care can be perfectly adjusted. The first thing to be done is to pass into the vagina a piece of sponge, with a string attached, to facilitate its removal. This serves the double purpose of cleaning the raw surface, and of preventing the lochial discharge from coming down upon the wound. Having ascertained the nature and extent of the rupture by separating the nates, and the relations of the opposing surfaces by bringing them into accurate apposition, the nates are to be held apart, the superior fold by the nurse, and the inferior by the left hand of the operator. The needle is passed in the manner to be described further on, as represented in Fig. 4, Pl. ii., taking care *to keep it out of sight throughout its whole course*. In this manner the deep sutures, two or three, are introduced, one

or more being required for the anterior portion of the wound, where the suture necessarily passes into the vagina. The wound is now carefully wiped with a clean sponge and the sutures tied, beginning with the posterior one. Finally, the vaginal sponge is removed. In the case of complete rupture I have not found it necessary, as in the cases above quoted, to employ any rectal sutures. There is also much less bleeding than in the secondary operation. Opium is given as required; the urine is drawn off at intervals of six or eight hours, or a catheter is tied in, if the nurse is inexperienced. If the catheter be tied in (a common elastic catheter is to be preferred), it will be best to plug it and draw the urine off at stated intervals, and to renew the instrument daily. The vagina must be washed out twice daily with a tepid solution of permanganate of potash or of chlorate of potash (three to five grains to the ounce), the patient lying the while on the left side. On the fourth or fifth day the rectum should be cleared out with an enema of soapy water, and then the sutures may be removed, when union will usually be found complete.

I have no hesitation in affirming that if the injury were immediately attended to in this manner, the remote operation would very seldom be required, and we should almost banish from the list

of the gynæcologist a number of female complaints, such as cystocele, rectocele, and prolapsus uteri.

II. REMOTE OPERATION.

The late Mr. Baker Brown, to whom as I have said is due the credit of establishing the operation in this country, while relying on the quilled suture exclusively, regarded the division of the sphincter ani as an *essential* part of the operation, as Dieffenbach held his parallel incisions. In the former he has been followed to the present day by systematic writers, who equally reject what he considered essential. I propose to show that while division of the sphincter is not essential (and in this I am supported by the authority of Dr. Savage*), the quills are not only unnecessary, but that they are positively injurious. In this I am glad to be able to quote the unqualified approval of that distinguished operator, Dr. Marion Sims, whose views I ascertained on the occasion of his last visit to this country (1876).

I claim the assent of all who have had much experience of the quills, when I say that I have

* Op. cit. p. 4, who rests his objection on anatomical grounds.

repeatedly seen extensive sloughing follow their use. I have more frequently observed that when union has taken place, the resulting perineum has been thin and inefficient, in no way restoring the perineal body; in fact, it has been a mere membrane. I have seen the simple suture succeed where the quilled suture had previously failed, and that under the same hands. My explanation of this is as follows:—When the quills are used the perineum is drawn out into an unnatural position, the fibres of the transverse muscles are violently stretched, as well as the elastic fibres which go so much to form the perineal body, and the projecting mass is semi-strangulated. It is usual to cut the deep sutures in from thirty-six to forty-eight hours after the operation, and any one who has had to do this will remember the sudden rebound of the parts, and the sinking in of the perineum when set free. The imperfectly united surfaces, as yet only, as it were, glued together, and without organisation of the connecting medium, are thus violently torn asunder; and were it not for the superficial sutures, which are always used at the same time, the whole perineum would inevitably break down. But yet another result is the sloughing, more or less extensive, in the track of the sutures; a result which is almost inevitable, unless

the pressure has been graduated "to a nicety." Here is the great difficulty ; for while the blood finds its way into the compressed tissues with some difficulty, its return is still more impeded ; the mass becomes engorged, the sutures become tighter, and the mischief goes on increasing. This sloughing moreover extends into the deepest part of the wound, destroying the perineal body, as must be evident from the amount of pus sometimes discharged in these cases. The superficial sutures, however, remain ; there is no drag at the line of surface apposition ; and union often takes place, the extent of which will depend on the depth to which these sutures have been applied. Hence, as I have said, a thin membranous perineum. In the case of complete rupture, a recto-vaginal fistula is by no means rare under these circumstances, proving the correctness of my explanation. When the rupture is incomplete, a perineo-vaginal fistula is apt to result. This happened in my first case, in which I used the quills. In my next case I was led to adopt the simple suture, from having witnessed a case operated on twice unsuccessfully with quills, and a third time successfully with the simple suture (silver wire). The first operation was a total failure ; the second resulted in a thin and narrow bridge about the middle of the perineum,

which of course was divided preparatory to the final operation.

My second case, to which I have just referred, was that of a young woman, aged twenty-five, who, in giving birth to an illegitimate child at the age of fifteen, under the care of a midwife, suffered complete rupture of the perineum. The superficial fibres of the sphincter ani were destroyed, so that she had no control over liquid or semi-liquid evacuations; the os uteri appeared at the vaginal outlet, and she suffered from irritability of the bladder, due to cystocele. She sought advice on account of the uterine prolapsus, and was admitted into the London Surgical Home in August, 1867. In this case I used the simple suture of silver wire, and the result was complete union. The contrast between this case and those treated by the quilled suture was so great, that the nurse who had charge of the case even now refers to it as the most successful case she had seen. This was due to the simple suture, as I could not then lay claim to any great amount of skill. Three months afterwards the uterus was well up in the vagina, the cystocele had disappeared, she had a thick and well-defined perineal body, and it was remarkable how little trace there remained of the operation.

From that time I have not used the quilled

suture, though I have frequently *seen it used*. In this manner I continued to employ the silver wire until about three years ago (1875), when I first used *silkworm gut*, the stoutest I could get—viz., such as is used for salmon flies ; and my first trial was so satisfactory that I now use it exclusively. I was led to employ it for the following reasons :—The silver wire, admirable though it is, in that it is non-absorbent, and hence produces very little irritation, is yet too rigid to adapt itself so as to equalise the pressure over the whole length of the loop, and is apt to do injury when being removed (and the more injury the stouter it is), while the silkworm gut is equally non-absorbent ; it adapts itself admirably because of its flexibility ; it produces no irritation, and can be removed with as much ease as a silk suture. The result is that my patients are now well in about a week, as the following case shows :—

C. C., aged twenty-five, was admitted into the Samaritan Free Hospital on May 25th, 1876. On January 20th she was delivered “by instruments,” after a labour of nineteen hours. Next day she felt very sore, and was conscious of “wind passing” by the vagina. She got up on the sixteenth day, and at the end of five weeks presented herself at the out-patient department of the hospital, where

she was seen by my (then) colleague, Dr. Godson. After weaning her baby, she entered the hospital on the above date. On examination it was seen that the perineum had been completely ruptured, that the greater portion of the sphincter ani had also been destroyed, and that behind the deeper fibres the recto-vaginal septum had been torn through. By contraction in the process of cicatrization this opening had been much reduced, and it now measured about three-eighths by one quarter of an inch, the largest diameter being in the axis of the vagina. The anterior edge of the fistula was about half an inch from the anal orifice.

On May 29th methylene bichloride was administered by Dr. Wynn Williams. Mr. Knowsley Thornton assisted me, and Dr. Deroubaix, of Brussels, and Dr. Hartcop were spectators. After vivifying the surface to the required extent (including the fistula), I first closed the fistula from the rectum by two fine silk sutures, and then completed the operation, in the manner to be described, with four deep silkworm-gut sutures, &c. The patient had not menstruated since weaning her baby, but on the next day the period came on, and it continued till the 4th June, very free. During this time the patient was simply kept clean externally, and the bowels were kept

confined by opium. On the 5th I removed all the sutures—the deep ones were beginning to cut—with the exception of one of the two in the rectum. *The wound was healed throughout.* During these seven days there was not even a blush on the whole length of the perineum, and I had the pleasure of calling the attention of Mr. Spencer Wells and others to this fact. But for the menstruation I should have removed the sutures on the fourth or fifth day, by which time there was no indication of cutting by the sutures. The patient *returned home on the 12th June—viz.,* the beginning of the fifteenth day, with a thick and sound perineum. A few weeks afterwards she presented herself for examination, and her condition was most satisfactory.

On looking over Mr. Baker Brown's record it will be found that the greater number of his patients were about a month under treatment; and cases quoted from other authors—notably three cases from a memoir by M. Verhaeghe, of Ostend, describing Langenbeck's method—show that the average duration of the treatment, *i.e.,* from the date of operation till the patient's return home, was about a month, while we cannot fail to notice also the frequency of purulent discharge, with not a few of the accidents to which I

have referred, such as recto-vaginal and perineo-vaginal fistula, &c., upwards to complete failure and death.* It must be evident that the amount of discharge means so much destruction of the perineal body, and that the nearer we approach to union by first intention the greater must be the success.

It will be convenient now to describe the various steps of the operation.

The patient, having been prepared in the usual manner (by aperient and enema), is placed in the lithotomy position† after anæsthesia has been sufficiently induced. An assistant on each side holds the nates and labia forcibly apart (so as to put the parts on the stretch) with the hand next the operator, the other hand being free to assist

* Mr. Baker Brown's list, which is brought down *only to March, 1864*, contains the following:—Amongst the cases of complete rupture in Nos. 3, 4, 12, 24, 32, 47, and 54, there remained a recto-vaginal fistula; in No. 62, result "incomplete" after remote operation, and subsequently, after immediate operation, a perineo-vaginal fistula; in cases 19 and 21, failure; and in 11 and 56, death resulted.

† I would here recommend the use of Clover's crutch. This is an apparatus for supporting the legs and keeping the knees apart. The assistance afforded by this apparatus will be more appreciated by the assistants than by the operator, and it allows of more efficient help being rendered by the former. It can be obtained of Messrs. Krohne and Sesemann, 8, Duke Street, Manchester Square, W.

the operator in sponging, holding sutures, &c. Hairs are shaved off and the parts are carefully sponged clean. Let us assume the case to be one of complete rupture through the sphincter ani, as the steps necessary for this include the other, as the greater includes the less, and it will save needless repetition.

Along the junction of skin and mucous membrane an incision is to be made on each side, from the termination of the nymphæ* to the rectum, and the lateral incisions are to be joined by a third across the septum at the junction of the mucous membrane of the vagina with that of the rectum. The mucous membrane is now to be removed on each side in the form of a triangle, whose base is formed by the middle line of the recto-vaginal septum. This may be done either by dissection, or in strips by means of scissors, which is a matter of choice. Baker Brown recommends the former, and it is most commonly used, but I agree with Emmet in preferring the latter. I am satisfied

* An error is sometimes committed in prolonging this incision too far forwards, involving the nymphæ themselves. It is a fatal error in the case of a woman capable of bearing children, as the rupture of this prolonged perineum is absolutely inevitable. The object of the operator should be to restore the perineum as nearly as possible to its original and normal condition and length.

that it is attended with less bleeding—a very important matter. When the denudation is completed, the form of the raw surface will be such as is represented in Fig. 2. Pressure is usually sufficient to arrest bleeding, which is for the most part venous, and for this purpose I know of no instrument at once so efficient and convenient as the torsion forceps invented by Mr. Spencer Wells, and used by him in ovariectomy. As many sutures as may be required are to be passed through the mucous membrane of the anus, as shown in Fig. 3. In doing this it will be found more convenient to use two needles to each thread, and to pass the needle *from the raw surface to the mucous membrane*, taking care to bring it out as near the edge of the latter as possible. In this way inversion of the mucous membrane is prevented, and perfect apposition of the edges insured. The material for this suture may be very fine silk, silkworm-gut, or catgut (Lister's).* The last will probably be found the best as it need not cause any trouble in removal: the ends may be cut off and the loop allowed to melt away. These

* After the experience gained in Case 7, I shall employ fine *silkworm* gut in preference to Lister's catgut. The sutures should not be removed till after the bowels have been well cleared out.

sutures having been tied and the ends cut off, or left hanging* from the now restored anus, the deep sutures now claim our attention.

A common curved surgical needle about two inches long, or a long curved needle set in a handle, may be employed. If the former is used, it is to be fixed in a holder (that of Spencer Wells is very convenient) and inserted on the left side, about a *quarter of an inch* from the margin of the skin, and about the same distance in front of the anal orifice. The needle is then to be pushed through the tissues until it emerges in the middle line of the recto-vaginal septum (the index finger of the left hand in the rectum acting as a guide to prevent its piercing the mucous membrane into the rectum). It is now drawn out, armed with the suture, and again reinserted as near the point of exit as possible, so as to leave none of the suture

* In a review of my paper, as it appeared in the *Obstetrical Journal*, published in the *Archives de Tocologie des Maladies des Femmes et des Enfants Nouveau-Nés*, for March, 1877, p. 188, Dr. Cazin urged the following objection to the practice of leaving the ends of the ligatures hanging from the anus—that “the presence of the threads might set up irritable action of the rectum, and cause tenesmus and troublesome contractions.” This objection is theoretical, for I have found that even the presence of a glass tube or piece of catheter has not done so. See Case 9. It is the escape of flatus that causes the contractions.

visible, and made to emerge at a corresponding point on the opposite side. With such a needle it is better not to attempt to pass it through at once. In this way sutures two and three are inserted.

If a needle mounted on a handle be used it should be as fine as possible, and it should not once come into view from the point of entrance on one side to that of exit on the other, as shown in Fig. 4, in which the course of the sutures is marked by the dotted lines. In this practice I find I am supported by Dr. T. Gaillard Thomas.*

Comparing this method with that represented by Baker Brown and Savage, its superior merits cannot fail to become evident. In these authors' plates the suture is represented as bridging over the raw surface to the extent of half an inch. The necessary result of this is the formation of a pouch, favouring the collection of blood in direct communication with the external surface by the track of the suture. The purulent process set up in the track of the suture is communicated to the blood clot, and hence an abscess which discharges itself in the direction of least resistance. This will be found to be between the imperfectly united surfaces, for the most part, and we have as the final result a recto-vaginal or perineo-vaginal fistula.

* See p. 136, *op. cit.*

The method herein advocated and practised by myself insures complete apposition to the very bottom of the wound.

It will be found best to arm the needle with the suture *after* it has passed through the tissues, for it is easier to withdraw the armed needle than to insert it.

In the case of Nos. 4 and 5 it is to be observed that whereas on the external aspect the suture is distant from the raw surface about a quarter of an inch, on the internal or vaginal aspect it passes through the very edge of the mucous membrane, thus preventing inversion of the latter.

It will be sometimes advisable to pass some additional fine sutures, as is done in the case of the rectum and anus, and the most convenient time for this is after the deep sutures have been inserted. When the recto-vaginal septum is very lax, tending to rectocele, it will be well to remove a triangular portion of the mucous membrane as shown in Fig. 5. I have in this way used as many as six or seven sutures.

Finally, the bleeding having ceased, and all coagulum having been removed, the deep sutures are to be tied; and the manner in which this is done is important. The nates are allowed to approach by bringing the knees together. The

sutures are then collected, and whilst they are held tight with the right hand, the first two fingers of the left are employed in pressing the tissues down upon the septum, so as to secure perfect coaptation of the raw surfaces, the force being applied from outside, but *not between*, the sutures. The latter are then entrusted to an assistant who holds them firm, and they are successively tied, beginning with the one next the anus. Should there be any inversion of the skin, superficial sutures may be applied, but they will rarely be necessary if the above precautions be observed.

Baker Brown regarded double lateral division of the sphincter ani as an *essential* part of the operation in the case of complete rupture. Yet in the immediate operation he thought it unnecessary. My experience proves that it is *in either case unnecessary*, and in this I am supported by the high authority of Dr. Savage, who, from anatomical considerations, has arrived at the following conclusion—viz., that “the success of operations for the closure of perineal lacerations is obviously not promoted by division of the superficial anal sphincter.” This statement is moreover endorsed, *as the result of experience*, by Dr. T. Gaillard Thomas, who quotes Sims, Emmet, and

Peaslee, as agreeing with him.* Mr. Spencer Wells, in a private note, says, "I can only remember two cases where I did it, and I consider it a perfectly unnecessary complication of the operation in ordinary cases." Further, in the Review already referred to, Dr. Cazin says, "in this he is in accord with a large number of my countrymen." He, however, thinks my statement too absolute, and is of opinion that "the liberating incisions, rejected in principle, should be used in the case of constriction of the finger by the newly restored orifice."† I will not quarrel with this limitation, but must repeat that I have never found it necessary.

Nor are the parallel incisions of Dieffenbach through the skin of any service. It must be evident that they cannot affect the deep portion of the wound, where the chief difficulty meets us.

It is worthy of special record that the difference in the amount of *pain*, in the two methods of suture—viz., the quilled and simple—is most remarkable. In the former case patients complain very much of pain, and opium is urgently required for its relief. In the latter it is *scarcely required* for this purpose. There can be no doubt of this

* Op. cit. p. 134.

† Op. cit. p. 189.

in the case of a patient who has been subjected to both methods, and this evidence I possess. See also Cases 6, 7, 8, and 9.

Opinion is divided as to the after treatment. Some operators keep the bowels confined for a week or more, while others prefer daily evacuation. My own practice is to give opium for two or three days, chiefly for the purpose of insuring the former condition, and the drug is otherwise invaluable. It allays nerve irritability, and by its action on the capillaries prevents bleeding. It keeps the parts at rest, and thus promotes the healing process.

The question of the use of alcoholic stimulants is a very important one, and on it I hold very decided opinions. Baker Brown used port wine extensively. I believe *all cases of operation are better without them, and I never administer them.* I have seen them given with the result, as I believe, of increasing the suppuration, and I have never seen them do good. *Alcoholism in no degree favours the healing process.* My experience in this operation as well as in that of ovariectomy, &c., convincingly proves this proposition.

The food should be light and unstimulating. After the sickness (if any) has ceased, milk and farinaceous diet should be given for two days

(oatmeal gruel is to be preferred); on the third day fish, and afterwards any wholesome food.

The patient should lie on either side with the thighs flexed; the external parts are to be kept clean by directing a stream of tepid water, or a solution of chlorate of potash (5 grains to the ounce), or of Condry's fluid, upon the perineum, and as dry as possible. The vagina may also be washed out with the same fluid if there be any discharge from it, care being taken not to use any great force, and to provide for the return current.

With regard to the catheter, I am in the habit of having it used every six hours, more for the purpose of avoiding movement on the part of the patient than of preventing access of urine to the wound; fear of the latter I regard as a bugbear. The following case clearly proves this.

Mrs. — was attended for me, in my absence, in her first confinement. The child was born just before the arrival of my substitute, who found the perineum badly ruptured. He at once applied three sutures of silver wire, and left a catheter in the bladder. On my return I found the patient in the most filthy state; the catheter had become blocked up, the urine passed by its side, and the stench arising from the saturation of the bedding with the mixture of urine and lochia, and the

condition of the parts, were beyond description. In spite of this union was complete. When, because of the incompetence of the nurse, it is necessary to employ the catheter in this way, it should be plugged, the urine should be drawn off at regular intervals, and the instrument should be changed as required.

On the fourth day, assuming that the bowels have been kept confined, three or four ounces of warm olive oil should be injected into the rectum, and in three or four hours more a soapy water enema should be administered. I have never known this do any harm. I should not willingly allow the bowels to act before forty-eight hours have passed, but I consider the practice of keeping them confined for a week to be a mistake.

After the rectum has been cleared out, the stitches may be removed, and a daily evacuation of the bowels should be afterwards secured by means of mild aperients.

In a simple case, that is, uncomplicated by prolapsus of rectum, bladder, or uterus, the patient may be allowed out of bed in ten or twelve days, or even earlier; otherwise the period must be prolonged according to circumstances.

If these details be attended to, the success of the operation will be rendered more certain than by

the method hitherto practised, and the period of convalescence will be much shortened.

Whereas I was formerly in the habit of using iron or silver wire, I now exclusively employ silkworm gut. With the former it is difficult, if not impossible, to guard the ends, and they are very much in the way of the necessary cleaning of the parts. With the latter there is no difficulty, and the comfort of the patient is much enhanced.

Of a considerable number of *immediate operations*, I select the last three which have occurred in my practice.

Mrs. P., first confinement, Aug. 1876. Head born just as I entered the room. Perineum ruptured down to the sphincter. Three silkworm gut sutures. Union complete on removal of the sutures on the fourth day.

Mrs. O., æt. thirty-two, first child, Sept. 5th, 1877. Labour tedious. Forceps. Perineum ruptured to sphincter. Three silkworm gut sutures. Union by first intention.

Mrs. D. had her perineum restored by my colleague, Mr. Knowsley Thornton. Attended by a neighbouring practitioner in my absence. Prevention of rupture impossible. Three hours after I found that the rupture had not taken the middle line, but passed to the right of the sphincter, which

was uninjured, and I at once introduced four silk-worm gut sutures. Circumstances prevented me from seeing her on the fourth day, and I was unable to visit her until the tenth day. I then removed the sutures. The parts were quite dry, presenting not even a blush of redness along the whole length of the perineum or around the stitch holes, and union was perfect.

REMOTE OPERATIONS.

I. *Nearly complete Rupture of Perineum.*—Mrs. P. applied at the out-patient department of the Samaritan Hospital (1869), complaining of “something coming down.” I found the perineum ruptured and a very large rectocele, which gave her great trouble in the evacuation of the bowels.

I restored the perineum as in Fig. 5, using iron wire for the deep sutures, and fine silk for the vaginal sutures, of which there were six. The parts healed up well, and the patient returned home at the end of three weeks. I have not since heard of her.

II. *Complete Rupture of Perineum.*—Mrs. L., æt. thirty-seven, entered the Samaritan Free Hospital, Feb. 26th, 1875. Two years previously was confined without the assistance of a medical

man, and the perineum was badly torn. A week after "was sewn up" by a doctor, but no union resulted. From that time has had no control over loose evacuations, and has suffered from a sort of chronic diarrhœa. Perineum ruptured through the sphincter. Five sutures of silkworm gut were employed, and one superficial next the anus. The central suture was removed on the third day after evacuation of bowels, another on the fifth, and all on the seventh day, when union was complete. The bowels were moved daily after this, and the patient was out of bed on or about the eleventh day.

III. *Nearly complete Rupture of Perineum.*—Mrs. S., æt. twenty-eight, admitted into Samaritan Free Hospital, May, 1875.

In Sept. 1873, was delivered of second child, and the perineum was ruptured partly through the sphincter. Three deep sutures, with as many superficial ones of silkworm gut were used as in Fig. 4. On the third day the bowels were moved; on the fourth the deep sutures were taken out, and two days later the superficial, and the patient went home on the twentieth day.

IV. *Partial Rupture of Perineum.*—A. B., æt. forty-three, admitted into the Samaritan Free Hospital, Nov. 22nd, 1876, has had eight children,

delivered naturally; the last a year and a half ago. This was the largest of her children, and she felt most sore after its birth.

On examination perineum found torn to about two-thirds of its extent and the septum bulging considerably. Nov. 25th.—Bichloride of methylene being administered by Dr. Champneys, Dr. Wynn Williams and Mr. Knowsley Thornton assisting, and Dr. Kuhlerkampff looking on, I operated as in Fig. 5, using five intra-vaginal sutures, five perineal, and one superficial (anal end) suture of silkworm gut. 28th.—Wound looking very well; removed the superficial suture and the deep one next to it, and the middle suture, after cleaning out the rectum with a soapy water enema. 29th.—Two of the intra-vaginal sutures have come away. 30th.—All the deep sutures removed. Dec. 2nd.—The remaining intra-vaginal sutures have come away. Dec. 9th.—Gone home, fourteenth day, with a good and sound perineum.

V. *Partial Rupture of Perineum*.—E. C., æt. thirty-eight, admitted into the Samaritan Free Hospital, May 22nd, 1877. Perineum torn in first labour, ten years ago. Child presented by arm, and was delivered by turning. On examination the tear was found to extend to rather more than half of the perineum.

May 24th.—Bichloride of methylene administered by Mr. Meredith. Four silkworm gut sutures.

28th.—Rectum washed out and sutures removed. Union complete, no redness whatever about the wound.

June 1st.—Stitch holes healed up. 5th.—Went home (twelfth day).

VI. *Complete Rupture of Perineum with half an inch of Recto-vaginal Septum ; fæcal incontinence.*—C. K., æt. twenty-eight, sent by Dr. Colbeck, of Dover, was admitted into the Samaritan Free Hospital, Aug. 4th, 1877. Delivered by forceps of her first child in Feb. 1874, and since then has never been able to control the action of the bowels. On examination the perineum was found torn through the sphincter, and about half an inch of the recto-vaginal septum.

Aug. 6th.—Assisted by Dr. Young, of Florence, and Mr. Alban Doran administering methylene bichloride, I operated as in Fig. 4, restoring the anus by means of six fine and closely set catgut sutures, and the perineum by five silkworm gut sutures.

8th.—Patient has not had a single dose of opium. Bowels acted this morning ; semifluid evacuation. No disturbance of wound.

11th.—After the rectum was cleared out by enema, in the presence of Dr. Young I removed all the deep sutures except the anterior one; no irritation of wound though two of stitches cutting a little; wound perfectly united. Returned home on 18th (twelfth day). On the 23rd, Dr. Colbeck reported that she was “doing extremely well.”

VII. *Partial Rupture with Cystocele and Rectocele*.—C. B., æt. twenty-five, admitted into the Samaritan Free Hospital on Dec. 7th, 1877, had her first and only child in August, 1875; was delivered by forceps, and felt very sore for some time afterwards. For a long time has suffered from “such a bearing down,” “womb coming down,” and pain in the left side. On examination I found the perineum torn with a few fibres of the sphincter, a considerable rectocele and commencing cystocele.

Dec. 8th.—Methylene bichloride, and afterwards chloroform, administered by Mr. Meredith, and Mr. Thornton assisting, I operated as in Fig. 5. Two sutures of silkworm gut were employed in contracting the vagina, and the ends were cut off short. Four sutures of same material were used in restoring the perineum.

11th.—Bowels freely moved. No opium required since the operation. No irritation of wound.

12th.—Removed three posterior deep stitches. Wound quite united externally. Vagina to be washed out with sol. potass. chlor. (gr. 10).

13th.—Last stitch removed. On using the syringe yesterday some offensive (pent up) discharge was washed out. Wound, however, looking very well.

19th.—Patient has gone home to-day (eleventh day) with instructions to wash out vagina daily with a weak solution of sulphurous acid (1 to 10), and to return in three weeks.

Jan. 9th, 1878.—Patient presented herself to-day. Perineum quite sound. No vaginal discharge. On introducing the finger three of the superficial intra-vaginal sutures were found *in situ*, and on passing one-half of a Neugebauer's speculum the line of the cicatrix in the median line of the septum was seen to be perfect; *no irritation* about the sutures, which were as harmless as the rings in a lady's ear. They were at once removed, and the patient went home feeling the greatest comfort from the operation.

VIII. *Partial Rupture of Perineum.*—M. N., æt. twenty-two, admitted into Samaritan Free Hospital, Jan. 15th, 1878, was delivered of first child Sept. 2nd, 1877, by a midwife, after a labour extending from Thursday evening till Saturday

morning. No instruments were employed. Felt sore for about a week. At the end of second week had an attack of "inflammation of the womb," which kept her in bed for three weeks. On getting about she complained of a bearing down, and has not yet got rid of it.

She applied at the out-patient department, where she was seen by my colleague, Dr. Day, who recommended her to enter the hospital for the restoration of the perineum.

Perineum ruptured to extent of rather more than half.

Jan. 18th.—Bichloride of methylene given by Mr. Meredith, and Mr. Doran assisting, I restored the perineum, using three silkworm gut sutures.

19th.—Complains of some soreness similar to, but not quite so bad as, that felt at same period after labour. Has had no opium; wound quite dry.

23rd.—After the rectum was cleared out I removed the stitches. Wound healed by first intention. No irritation whatever.

26th.—Out of bed, feeling quite well, with the exception of a little irritation of the bladder, result of catheterism. To take acid. hydrochlor. dil. m. 10, three times a day.

29th.—Everything healed, even to the stitch holes.

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30th.—Has gone home to-day (twelfth day), feeling quite well ; no bearing down or discomfort of any kind.

IX. *Complete Rupture of Perineum, with about half an inch of Recto-vaginal Septum.*—E. A., æt. twenty-four, admitted into the Samaritan Free Hospital on Jan. 23rd, 1878, was delivered of her first child, after a labour of about eighteen hours, on Oct. 21st, 1877 ; felt very sore, and four days afterwards she found she had no control over the bowel when moved by castor oil. At the end of a week her medical attendant put in one stitch, which produced no benefit. She has had no control over loose evacuation since her confinement.

On examination the perineum was found completely ruptured, the tear extending about half an inch up the septum.

Jan. 26th.—Mr. Meredith administering chloroform, Mr. Knowsley Thornton assisting, and in the presence of Mr. Muir, I performed my usual operation, employing four fine silkworm gut sutures for the anus and five for the perineum. 27th.—Feels less sore than at corresponding period after her labour, and has had no opium. 28th.—Spasm of the sphincter ensues on the passage of flatus, otherwise the anal sutures cause *no dis-*

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comfort. 29th.—Vagina washed out with sol. of chlorate of potash (5 grs. to ounce). Three ounces of olive oil injected into bowel at bedtime. 30th.—Bowel cleared out by enema this morning. Perineum looks very well; wound healed; no discharge; removed four perineal sutures. 31st.—Removed last perineal suture—viz., that next the anus. Feb. 2nd.—Stitch holes healed. The rectal sutures produce no discomfort. Bowels open. 4th.—Removed three rectal sutures. Bowels open daily. Patient to get up. 7th.—Menses have appeared to-day. Patient walking about the ward since 5th. 9th.—Menses have almost ceased. Perineum quite sound. Last anal stitch removed. 10th.—Gone home (fifteenth day).

EXPLANATION OF FIGURES.

FIG. I.—Antero-posterior section of pelvis, showing the perineal body *a* (Savage).

FIG. II.—Represents a case of complete rupture through the sphincter ani, and the extent of denudation of the mucous membrane of the vagina. *The nates are supposed to be held apart by an assistant on each side, so as to keep the parts on the stretch.*

FIG. III.—Shows the manner in which the sutures are inserted for the restoration of the anus.

FIG. IV.—Represents the anal sutures tied, and the mode of passing the deep sutures. 1, 2, and 3 sutures are not visible from the point of entrance to that of exit. *a*, an additional suture, to be tied after No. 1, to secure perfect coaptation of the edges.

FIG V.—The top sutures, for the purpose of narrowing the vagina when the recto-vaginal septum is redundant (rectocele), the mucous membrane having been removed in the form of a triangle.

Fig. 1.

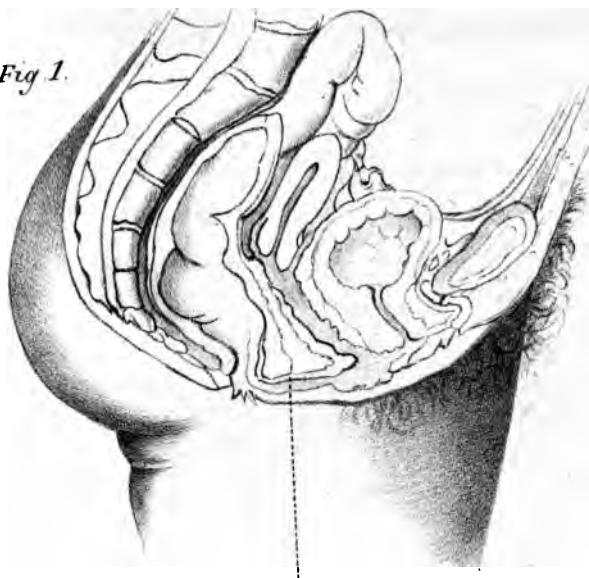


Fig. 2.



Fig. 3.

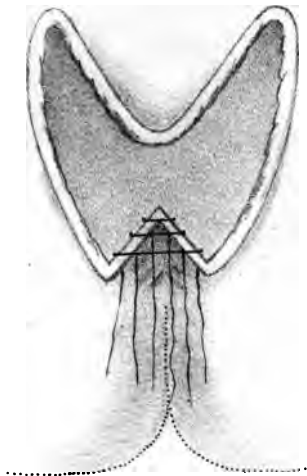


Fig 4

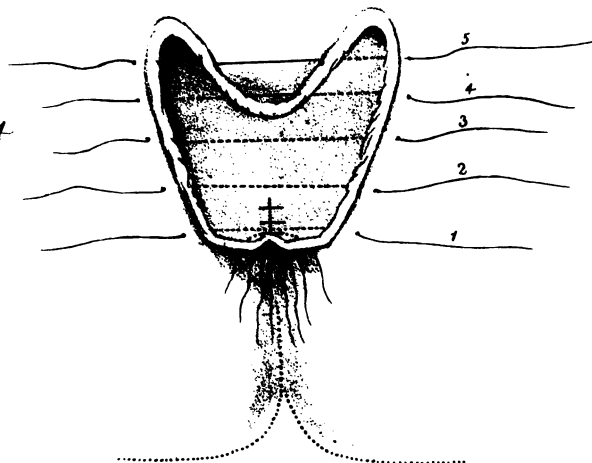
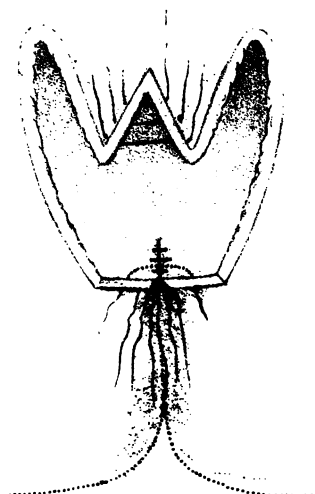


Fig. 5





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